

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

MAILED

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

AUG 20 2003

**PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte DONALD NORMAN SPITZ, CARL EDMOND SULLIVAN,
DAVID AMOS WARD, BENJAMIN ALAN ASKREN,
MICHAEL DAVID LATTUCA, ASHOK MURTHY,
RONALD MONROE NOWELL, JR.
and DARRIN WAYNE OLIVER

Appeal No. 2002-0503
Application No. 09/089,698

ON BRIEF

Before WALTZ, KRATZ and DELMENDO, Administrative Patent Judges.
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 1-22 and 25-31. The rejection of the remaining pending claims 32-39 has been withdrawn by the examiner.

BACKGROUND

Appellants' invention relates to an ink jet print cartridge including a substrate holder having a specified construction including sidewall fins. Exemplary claim 1 is reproduced below.

1. An ink jet print cartridge structure comprising a substrate holder for mounting thereon one or more semiconductor substrates, the substrate holder having a top surface having a perimeter and containing one or more substrate locator wells, each well having a plurality of well walls and a well base, each well base including at least one ink feed slot therein, the holder including one or more chambers on an opposing side of the substrate holder from the locator well, each chamber being in flow communication with a corresponding substrate locator well, the holder also containing side walls attached to the top surface along the perimeter thereof, wherein one or more of the side walls contain fins for convectively removing heat from the substrate holder.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Watanabe et al. (Watanabe)	4,689,659	Aug. 25, 1987
Ta et al. (Ta)	4,755,836	Jul. 05, 1988
Fukuda et al. (Fukuda)	5,066,964	Nov. 19, 1991
Drake et al. (Drake)	5,079,189	Jan. 07, 1992
Wong	5,084,713	Jan. 28, 1992
Wenzel et al. (Wenzel)	5,426,458	Jun. 20, 1995
Oda et al. (Oda)	5,552,816	Sep. 03, 1996
Cook	5,834,689	Nov. 10, 1998 (filed Dec. 02, 1993)

Claims 1, 4, 5 and 10-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe. Claims 2 and 3 stand rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe and Fukuda. Claims 6

and 7 stand rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe and Wenzel. Claim 8 stands rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe and Drake. Claim 9 stands rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe and Cook. Claim 13 stands rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe and Ta. Claims 14, 17 and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe and Ta. Claims 15 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe, Ta and Fukuda. Claims 19 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe, Ta and Wenzel. Claim 21 stands rejected under 35 U.S.C. § 103 as being unpatentable over Oda in view of Watanabe, Ta and Drake. Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Oda in view of Watanabe, Ta and Cook. Claims 25-28 and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Oda in view of Watanabe, Ta, Fukuda and Wong. Claims 29 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Oda in view of Watanabe, Ta, Fukuda, Wong and Wenzel.

We refer to the briefs and to the answer for a complete exposition of the opposing viewpoints expressed by appellants and the examiner concerning the issues before us on this appeal.

OPINION

We have carefully reviewed the entire record, including all of the arguments and evidence advanced by both the examiner and the appellants in support of their respective positions. This review leads us to conclude that the examiner's rejections are not well founded. Accordingly, we reverse all of the aforementioned rejections. The reasons for our determination follow.

In the rejections stated in the answer, the examiner has acknowledged that Oda does not disclose an ink jet print cartridge having a substrate holder that includes one or more side walls with fins as required by all of the claims on appeal.

To remedy that acknowledged difference between the claimed invention and Oda (answer, pages 3-14), the examiner has relied upon Watanabe. According to the examiner (answer, page 5):

Watanabe teaches a temperature controller for a semi-conductor device. As can be seen in Fig. 1, the heat sink is provided with integrally formed fins (6A, 6B) for the purpose of increasing the surface area of the heat sink, thereby increasing the rate at which heat is dissipated. It would have been obvious to one of ordinary skill in the art at the time the invention

was made to have provided in Oda et al. a heat sink having integrally formed fins for the purpose of increasing the surface area of the heat sink, thereby increasing the rate at which heat is dissipated as taught to be old by Watanabe.

The examiner acknowledges that Oda is not relied upon to provide motivation for the examiner's proposed modification of Oda. Rather, the examiner relies on Watanabe for the suggestion for the proposed modification of Oda. See the paragraph bridging pages 15 and 16 of the answer. According to the examiner, the device of Watanabe is analogous to the device of Oda and one of ordinary skill in the art would have been led to employ a heat sink with fins in Oda to improve efficiency in dissipating heat generated by a semiconductor chip. See page 17 of the answer.

We cannot agree with the examiner's obviousness conclusion on the record before us.

Under 35 U.S.C. § 103(a), the examiner carries the initial burden of establishing a prima facie case of obviousness.

In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). As part of meeting this initial burden, the examiner must determine whether the differences between the subject matter of the claims and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art"

(emphasis added). 35 U.S.C. § 103(a) (1999); Graham v. John Deere Co., 383 U.S. 1, 14, 148 USPQ 459, 465 (1966).

Here, as pointed out by the appellants in their briefs, the examiner has not established any convincing reason, suggestion or motivation for combining the references so as to arrive at the claimed subject matter. In particular, the examiner has not fairly explained why one of ordinary skill in the art would turn to the disparate structure of Watanabe, and teachings related thereto, for a suggestion to modify the structure of Oda. Watanabe is concerned with furnishing a temperature controller and related structure that is "capable of highly accurately and quickly controlling the temperature of a semiconductor device such as a semiconductor laser." See column 1, lines 50-55 of Watanabe. The temperature control system of Watanabe includes thermal insulation (5, Fig. 1) disposed around the semiconductor device, a temperature sensor (3, Fig. 1), an electronic cooling device (4, Fig. 1), and a block shaped heat sink (7, Fig. 1). Watanabe specifies that the heat sink and the electronic cooling device function together to control temperature. Oda, on the other hand, is concerned with an ink tank, ink jet cartridge and recording apparatus. A head tip (18, Fig. 1) of Oda includes a plurality of ink jet nozzles and is supported in a heat sink (17,

Fig. 1) located below the bottom wall (12, Fig. 1) of a tank holder. The tank holder includes a cylindrical ink joint (14, Fig. 1) on the upper surface of the bottom wall thereof holding a disc filter (14a, Fig. 1) in the upper portion of the cylinder. The examiner has not pointed to any disclosure in Oda that would suggest a need for a quick and highly accurate temperature control system. In this regard, the examiner has not established that one of ordinary skill in the art would view the heat dissipating capacity of the heat sink (17, Fig. 1) of Oda as requiring any correction or modification.

While the heat radiating heat sink of Watanabe has fins to aid in heat dissipation, that fact, by itself, does not serve to establish that one of ordinary skill in the art would have been led to employ such fins in Oda's device in a fashion so as to arrive at the here claimed subject matter based on the combined teachings of the references. The mere fact that the prior art may be modified to reflect features of the claimed invention does not make the modification obvious unless the desirability of such modification is suggested by the prior art.

Rejections based on § 103(a) must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. See In re

Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellants' disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. See, e.g., Grain Processing Corp. v. American Maize-Products Co., 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

From our perspective, the examiner's rejections appear to be premised on impermissible hindsight reasoning. On the record of this appeal, it is our view that the examiner has not carried the burden of establishing a prima facie case of obviousness with respect to the subject matter defined by the appealed claims.

Since the examiner has not established that any of the other applied references would make up for the above-noted deficiencies in the combined teachings of Oda and Watanabe, we will not sustain any of the stated rejections.

The decision of the examiner to reject the appealed claims under 35 U.S.C. § 103 is reversed.

Thomas A. Waltz
THOMAS A. WALTZ)

)

)

)

;

1.

,

)

)

)

)

)

)

)

)

)

Peter F. Kratz

BOARD OF PATENT
APPEALS
AND
INTERFERENCES

Arnold H. Delmonico

ROMULO H. DELMENDO
Administrative Patent Judge

Appeal No. 2002-0503
Application No. 09/089,698

Page 10

JOHN J. MCCARDLE, JR
LEXMARK INTERNATIONAL INCORPORATED
INTELLECTUAL PROPERTY DEPARTMENT
740 NEW CIRCLE ROAD NW
LEXINGTON, KY 40550